

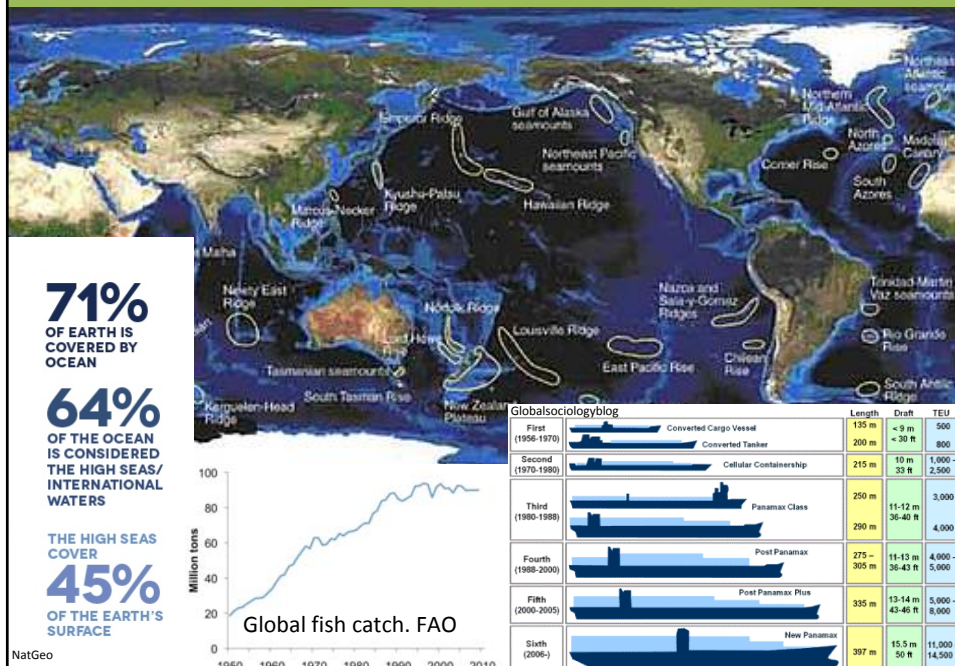
Exchange of information on marine biodiversity beyond national jurisdiction

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The last frontier



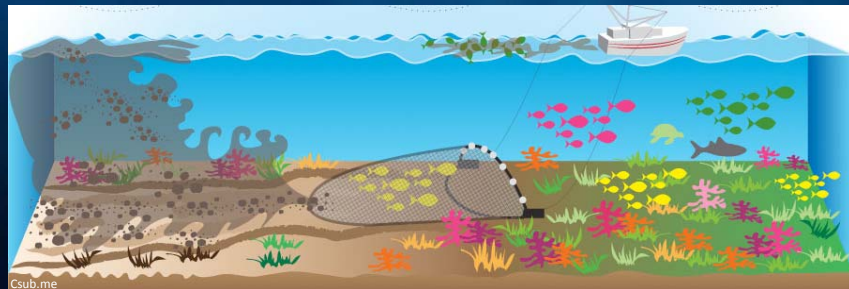


Ecological evidence indicates the importance of coordinated and systematic exchange of information and management

1. Processes in the water column link the surface to deep waters and the seafloor, and link water masses laterally
 - Requires regionally and vertically integrated management (McIntyre 2010).
2. Species and habitats have differing vulnerabilities to exploitation and some are critically endangered
 - Requires cross-sectoral cooperation to ensure cumulative impacts don't drive extinctions and regime shifts (Dulvy et al. 2003).

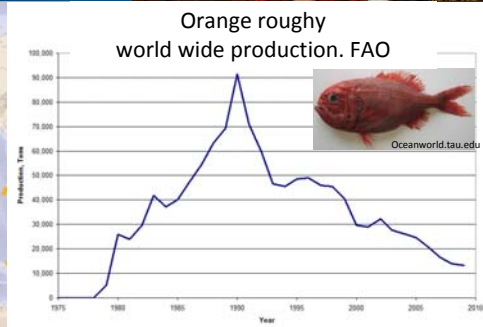
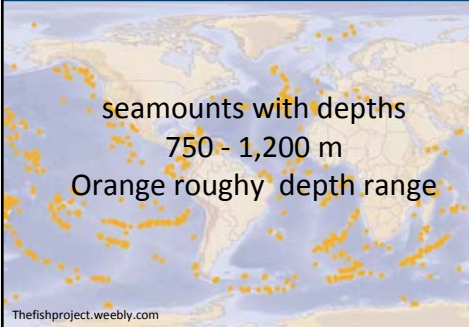
Examples of linkages:

- Some pelagic fisheries are profitable and sustainable
 - Bycatch has driven severe declines of oceanic sharks
- Prey requirements are not considered in single species fisheries management
- Degradation of habitats resulting from high seas industries



Ecological evidence indicates the importance of coordinated and systematic exchange of information and management

- 3. Even less is known about ecosystem functioning and species life-cycles in the high seas than in coastal areas
 - Suggesting the option of adaptive and precautionary management.



Exchange of information

Data are often concentrated on features of concern such as threatened species or fragile habitats.

Human impacts like fishing and mining are not integrated because they arise from independently managed industries.



Exchange of information

The conventional approach taken to exchange of information :

- Limited, regional, sector-by-sector approach
- Multiple authorities managing parts of the same regions
- Extensive areas without governance arrangements
- Few attempts to coordinate activities and facilitate communication
- Little exchange information
- Little effort to mitigate conflicts
- Little effort to address cumulative impacts.

Exchange of information

The problem ???

- The high seas is information poor
- Even when there is information the problem is exacerbated by poor mechanisms for storing and accessing data. Data is often only useful for management if there is a process within which the data and information can be used to produce advice that will feed into decision-making that will require implementation.
- Push to pool data
- Gaps can be addressed using tested proxies, models and statistical sampling
- Facilitate international coordination, collaborative scientific research and focused regional work

Way forward: Exchange of information

One option:

The process within which the information will be used could be the driver of what mechanisms for management and sharing are established?

Transparency:

defined goals, explicit analyses of data, quantitative objectives

Inclusiveness: engaged stakeholders, consideration of known elements of biodiversity

Integration: complementarity of selected areas and actions, spatial connectivity

Efficiency: costs to users and implementers are minimized

Way forward: exchange of information

- Who needs the information?
 - Managers?
 - Scientists?
 - Industry?
- What is the information for?
 - Conservation?
 - Sustainable use?
 - Planning?

Way forward :exchange of information

- Are we just going to exchange it? Or is there a purpose for the exchange?
 - Someone's knowledge?
 - Commercial purposes?
- Who determines what type of information is needed?
 - Government?
 - Governance?
 - Industries?
 - Scientist?

Way forward :exchange of information

The information from those questions could feed into a Systematic Conservation Planning instead of sector-specific or *ad hoc* approaches

Providing a framework to examine whether existing mechanisms meet the basic requirements for conservation and sustainable management

Identifying and prioritizing science needs for cost-effective management

Way forward :exchange of information

Help build international collaboration and direct funding toward the science most useful for managers and policy-makers

Processes can be formal, are iterative, adaptive and determine their own information needs

Thank you